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1988

ANNUAL REPORT

OF THE

FIRE DEPARTMENT

FOR THE PERIOD

JANUARY 1, 1988, TO DECEMBER 31, 1988

BOSTON, FEBRUARY 1, 1991

HON. RAYMOND L. FLYNN,
Mayor of Boston.

DEAR MR. MAYOR:

I submit herewith the annual report of the Boston Fire Department for the period January 1, 1988 to December 31, 1988.

The rebuilding program continued and antiquated apparatus was replaced. In this calendar year, the Boston Fire Department placed five new pieces of apparatus into service. This included one engine pumper and four 110′ aerial ladder trucks.

Multiple alarms were thirteen fewer than in calendar year 1987 and this can be credited to the rebuilding program of apparatus and related fire equipment.

The department strength continued at approximately three hundred firefighters on duty in every twenty-four hour period, which is a top priority for the Boston Fire Department.

The present administration continues to be a tremendous asset in our rebuilding program and for this we are extremely grateful.

Respectfully submitted,

MARTIN E. PIERCE, JR.,
Fire Commissioner/Chief.

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HEADQUARTERS STAFF

Fire Commissioner
LEO D. STAPLETON

Chief of Operations
Deputy Chief
JOHN D. WHITE

District Chief
Assistant to the Commissioner
JEREMIAH J. DONOVAN

Executive Assistant to the Commissioner
GERARD J. HORGAN

Department Medical Examiner
ALAN W. JENEST, M.D.

Deputy Fire Chief in Charge
Personnel Division
JOHN A. LOCKHEAD

Deputy Fire Chief in Charge
Fire Prevention Division
FIRE MARSHAL MARTIN FISHER

Deputy Fire Chief in Charge
Special Services Division
Director of Civil Defense
NINO N. TRAMONTOZZI

Deputy Fire Chief in Charge
Training, Maintenance and Research Division
MARTIN E. PIERCE, JR.

Superintendent of Fire Alarm Division
ROBERT J. MCCARTHY

Chaplains
REV. MSGR. JAMES J. KEATING, Catholic
RABBI IRA A. KORFF, Jewish
REV. EARL W. JACKSON, JR., Protestant

HEADQUARTERS DIVISION

1) Executive Assistant's Office
2) Public Information
3) Accounting
4) Budget/Fiscal Office
5) Executive Secretary's Office
6) Management Information Systems
7) Payroll

EXECUTIVE ASSISTANT'S OFFICE

The Office of the Executive Assistant's first line of responsibility is to the Fire Commissioner/Chief of the Boston Fire Department. The office assists in the administration of the Department and makes recommendations for plans and policies. The Executive Assistant acts as the Commissioner's liaison with various divisions of the Fire Department, City of Boston Departments, and state and federal agencies.

Commissioner/Chief Leo D. Stapleton continued his policy of replacing antiquated equipment. The Boston Fire Department received four 110-foot Aerial Ladder Trucks in June of 1988. These ladder trucks were assigned to Ladder 1 in the North End, Ladder 11 in Brighton, Ladder 23 in Dorchester and Ladder 24 in Boston. This brought the total replacement of apparatus, which began in 1984, to thirty-three Engine Pumpers, thirteen Ladder Trucks, two Rescue Companies, and one 95′ Aerial Tower Unit.

The on duty force averaged three hundred fire fighting personnel in any twenty-four hour period, a personal goal sought by Commissioner Stapleton.

The Office of the Executive Assistant is responsible for the operating budget and all capital bonding monies invested in the Department. The operating budget for the fiscal year 1988 was $74,837,121. Personal services encompassed the largest part of the budget — $68,807,770.

This office oversees the work of all civilian employees. Departments include Auditing, the Executive Secretary's Office, Management Information Systems and Payroll. Personnel primarily work at Headquarters and assist Department members and the general public.

BUDGET EXPENDITURES

	FY 1987	FY 1988
Total Personal Services	$62,311,502	$68,807,770
Total Contractual Services	2,328,956	2,568,467
Total Supplies and Materials	1,693,451	1,925,138
Total Current Charges	638,059	989,515
Total Equipment	1,269,816	546,231
Grand Total	$68,241,784	$74,837,121

PUBLIC INFORMATION

The Public Information Office serves as a connecting link between the Boston Fire Department and the people living and working in Boston.

Most surveys and requests for information are directed to this section. Research materials and information are gathered for documentaries, newspaper or magazine articles, radio, and television programs. The Office acts as a liaison to the Greater Boston Fire Safety Council, a group of Greater Boston business people whose efforts assist the Boston Fire Department in fire safety education. Arrangements are made to provide fire prevention and fire safety materials to interested parties.

Departmental swearings-in, promotional ceremonies and award presentations are coordinated. This section cooperates with the Department Chaplains, the Church Committee, and the Honor Guard in the preparation of dedications, memorials, funerals, and other spiritual functions.

HEADQUARTERS

The Boston Fire Department Headquarters Division consists of five (5) sections under the direction of the Assistant to the Commissioner. These areas insure that the Department is operated in an efficient manner.

ACCOUNTING

The Accounting Office is responsible for all fiscal expenditure forms and requests forwarded from the Boston Fire Department Budget Office. These include service orders, non orders, requisitions, purchase orders, change orders and contracts.

Records are kept of all transactions, expenditures and charges as they occur. Balances are posted daily. The section is in constant communication with City Hall Departments such as Auditing, Budget, Purchasing and Treasury and vendors to secure information concerning payments, purchases and deliveries, account coding, and other changes.

BUDGET/FISCAL OFFICE

The Budget Office is responsible for overseeing fiscal reports generated by the Department, including projections, monthly progress reports, spending plans, and changes as well as information on the Mayor's priority goals.

Requisitions, service orders, non orders and contracts are reviewed and either approved or changes recommended. Quarterly meetings were held with program managers to review their expenditures and measurements.

Annual budget requests for the Boston Fire Department are sent to this Office. The budget is then reviewed by the top level managers of the Department. The Fire Commissioner, when satisfied with the fiscal year's budget, submits it to the Mayor for approval.

EXECUTIVE SECRETARY'S OFFICE

The Executive Secretary's Office maintains all personnel records, accounts and reports pertaining to the Department.

This section acts as the conduit for all matters relating to the personnel system including salary adjustments, the hiring of new employees, all fire fighter indemnifications, civil service matters relative to appointments, and promotions.

The staff interprets collective bargaining agreements that may result in step rate increases, vacation allowances, posting of vacancies, worker's compensation, bonuses, leaves of absence, and retirements.

Motor vehicle accidents, damages to department property, third-party payments, and charges to the Massachusetts Turnpike Authority for departmental services are coordinated with the City of Boston Law Department.

The personnel budget for each division of the department is prepared yearly.

MANAGEMENT INFORMATION SYSTEMS UNIT

The Management Information Systems Unit (MISU) coordinates the electronic data processing operations of the Boston Fire Department. These operations include the development and maintenance of computer applications at Headquarters and Fire Alarm.

A Wang VS Minicomputer is used at Fire Alarm to assist in dispatching operations and the identification of special hazards and other information.

PAYROLL

The Payroll Division's responsibility is to ensure that Department personnel are paid accurately and on a timely basis.

Employees are assisted in making decisions on payroll deductions and medical and insurance options.

On receipt of subpoenas and insurance claims, this division does the necessary research of employees' payroll records.

PERSONNEL DIVISION

1) Administration
2) Medical Examiner's Office
3) Selection Unit
4) Personnel Assignment
5) Employees Assistance Program

PERSONNEL DIVISION

The Personnel Division is divided into the following sections: Administration, Medical Examiner's Officer, Selection Unit, Personnel Assignment and the Employees Assistance Program (EAP).

ADMINISTRATION

The Administration section is responsible for liaison with various departments including: the Department of Personnel Administration, Local 718, the Law Department, and other departments and local unions throughout the country. This division investigates charges and grievances and follows them through at Labor Relations and Arbitration. A member of this office attends all Civil Service disciplinary hearings, Selection Unit appeals, M.C.A.D. cases, and court cases concerning the Boston Fire Department.

MEDICAL EXAMINER'S OFFICE

The Medical Examiner's Office came in contact with personnel through office visits, physicals, Hepatitis B and flu shots. This section is responsible for the security and maintenance of medical files for the Department. The Hospital Representative made numerous visits to hospitals to see members who have been admitted.

SELECTION UNIT

This unit is responsible for scheduling numerous examinations and tests including: medical tests, strength/agility tests with the State, physicals, screening interviews, and fingerprinting. Public lotteries are held to place candidates on a list with tied marks. Each person's application is reviewed and an in-depth background investigation is conducted. The Department of Personnel Administration is contacted on all matters regarding hiring procedures. The Selection Unit acts as a liaison with medical facilities for drug testing purposes and also arranges drug tests for all Fire Fighters on Probation. Fire Departments across the country are contacted to compare hiring procedures.

PERSONNEL ASSIGNMENT

This Office is responsible for the assignment of all Pool and Acting Officers to vacancies which occur due to vacations, injured leave, department business and other circumstances. All promotions within the Department are coordinated with the Commissioner's Office, Executive Secretary's Office, and the Department of Personnel Administration. The assignment of all vacations within the Department is coordinated with the Deputy Chiefs in Divisions 1 and 2. The unit orders, assigns and distributes all badges, hat devices, and lapel devices.

EMPLOYEES ASSISTANCE PROGRAM (EAP)

The Boston Fire Department/Local 718 EAP is a joint venture between the Department and Local 718. Its primary purpose is to assist the membership in addressing problems in the areas of: substance abuse, marital, legal, stress and financial. These services are also offered to a member's family and retirees.

The EAP staff maintains services 24 hours a day, 7 days a week. The location of the EAP is at the Long Island Hospital. It is staffed with one officer and three fire fighters who are certified in the EAP field.

The staff addresses every fire house and fire college on an annual basis. Each new drill class is spoken with. Many smaller departments have been assisted in establishing EAPs. The BFD/Local 718 EAP is responsible for assisting and establishing the International Association of Fire Fighters' Committee on EAPs.

110TH ANNUAL BALL

The 110th Annual Ball and Awards Ceremony of the Boston Fire Department was held on May 26th, 1989 at the Park Plaza Hotel. Fire Fighter Daniel L. MacDougall, B.F.D. Retired, was the Master of Ceremonies.

The following members were honored for their meritorious acts during 1988.

AMERICAN LEGION AWARD

Fire Captain James M. Flaherty, Headquarters

AWARD OF RECOGNITION

Fire Captain John J. McKenna, Engine Company 4
District Fire Chief Edmund G. Maiorana, District 5
District Fire Chief Kevin P. MacCurtain, District 5
Fire Lieutenant John F. Joyce, Rescue Company 1

DISTINGUISHED SERVICE AWARD

Fire Fighter James B. Lavey, Ladder Company 19
Fire Fighter William D. Trojano, Ladder Company 11
Superintendent Dennis B. Flynn, Maintenance Division
Fire Fighter (Inspector) Isaac Hendricks,
Fire Prevention Division
Fire Fighter Robert T. Lynch, Engine Company 17
Fire Fighter William G. Austin, Engine Company 17

ROLL OF MERIT

Fire Lieutenant Charles M. Parillo, Ladder Company 14
Fire Fighter Richard F. Felton, Ladder Company 14
Fire Fighter Paul D. Hynes, Aide to District 12

JOHN E. FITZGERALD MEDAL FOR THE MOST MERITORIOUS ACT BOSTON FIRE COMMISSIONER'S AWARD

Fire Captain James M. Flaherty, Headquarters

FIRE PREVENTION DIVISION

1) General Inspections
2) License and Permit Section
3) Special Hazards
4) Special Occupancies
5) Night Inspection Division
6) Plans Examiner
7) Fire Education
8) Fire Prevention Records
9) Microfiche Section
10) High Rise Sprinkler Retro Fit
11) Needless Alarm Reduction Program
12) Chemist
13) Fire Investigation Unit

FIRE PREVENTION

The Fire Prevention Division consists of many sections. The following contains a brief overview of each area.

GENERAL INSPECTIONS

The District Inspectors inspect smoke detectors for the sale of one- to five-family houses under Chapter 148 Section 26F. They resolve complaints in their districts, review permits and licenses, and issue abatements for violations.

The inspectors follow up on abatements that are sent in from the field. Non compliance cases and code violations are resolved through court action if necessary.

Other City departments are notified when a situation is observed that should be brought to their attention through Form 65s.

The Fire Marshal meets with the Inspectional Services Department Commissioner regularly to resolve conflicts.

LICENSE AND PERMIT SECTION

The License and Permit Section is responsible for conducting inspections of facilities, businesses, and construction sites where Fire Department permits are required. Permits are necessary for such activities as the storage and handling of flammable and combustible liquids, gasses, and solids; the construction or alteration of any structure; placement of dumpsters; the handling of asbestos; welding or cutting operations; the use, storage or handling of explosive materials; and the installation or subsequent impairment of fire protection or suppression systems.

As a direct result of aggressive permitting by this section, especially where construction and demolition take place, the fire incidence at construction sites has gone from common every day practice to nil. A construction site has not required more than one alarm since Rowe's Wharf in 1986.

A major part of making and keeping construction sites safe has been solving the winter heating problem of these sites. This solution has involved substitution of steam and/or diesel in place of both random and universal use of propane to heat buildings open to the weather. This has been accomplished through the permitting process, and again active and aggressive enforcement.

This section inspects licensed properties and serves as the Fire Commissioner's designee for the City as an appointed member of the Committee on Licenses.

This office is involved in the ongoing restructuring and expansion of the permit and license system and utilizes its expertise to develop codes and procedures to respond to complex fire-related problems and hazards. As part of this, the Boston Fire Prevention Code has been amended to reflect current thinking and practices.

SPECIAL HAZARDS

527 CMR 9.00 mandated changes for underground storage facilities including requiring double walled tanks and piping, and the retrofitting of old tanks with containment manholes, overfill and cathodic protection. Quick lube centers fall under the same regulations.

Self service gas stations are now the responsibility of local Fire Departments. This involves the approval of plans through the final inspection before they are allowed to operate. A yearly inspection then follows.

The even numbered years create additional work. The State Fire Marshal's stickers for tank trucks and other vehicles carrying flammable/combustible liquids expire on August 31st of even numbered years. Over 300 vehicles were inspected during the year.

With a growing concern world wide in our environment, we are seeing constant change in federal and state regulations governing underground tanks. There were almost 400 underground tanks removed this year in the City. With new regulations going into effect, we should see a big increase in underground tank work throughout the City in the next few years. A reminder that all work being done on underground tanks requires a permit from the Fire Department.

SPECIAL OCCUPANCIES

Company officers in the field complete quarterly inspections of hospitals and schools. Fire Prevention Inspectors assist them due to the complexity of the occupancies involved. Abatements are reviewed to insure that a location has complied with the Fire Department's findings. Consultation and suggestions are made concerning new construction or modifications to existing structures. Fire education for a specific occupancy is provided to assist the management in preventing fires.

There are a number of different occupancies, that due to their size and potential life safety hazard, require special knowledge and are assigned full time inspectors by the Boston Fire Department. These include hospitals, hotels, schools, nursing homes, day care centers, and laboratories. Legally mandated, routine inspections are made to insure code compliance, as well as a review of Fire Department responses to these locations.

NIGHT INSPECTION DIVISION

The Night Inspection Division inspects approximately 1,600 facilities with a capacity of fifty (50) or more people. All places of assembly are inspected quarterly. The busier night clubs are inspected weekend nights for overcrowding and other violations. These events include concerts, live theater, the Boston Garden, Fenway Park, the Hynes Auditorium, and college arenas.

PLANS EXAMINER

The Boston Fire Department Plans Examiner provides a comprehensive review of building plans to insure compliance with state and city codes. These codes include the Massachusetts State Building Code, the Massachusetts Fire Prevention Regulations, Chapter 148 of the Massachusetts General Laws — better known as the Fire Prevention Laws, Fire Prevention Order 87-2 (Boston Fire Alarm Regulations) and the Boston Fire Prevention Code.

Items reviewed include locations and requirements for fire hydrants, Fire Department vehicular access, automatic sprinkler systems, fire alarm systems, and hazardous material storage. Proper installation of these items provides safer buildings for occupants and fire fighters.

Meetings are held with building owners to discuss fire prevention strategies. Technical assistance is given to other city and state agencies. Involvement prior to building construction insures building designs are consistent with the Boston Fire Department's goals of protecting life and property.

The City of Boston is fortunate to a have a Fire Prevention Engineer in training on its staff, affording the Boston Fire Department a uniquely professional approach to fire safety, benefitting the public's safety as well as fire fighter safety.

FIRE EDUCATION

The Office of Fire Education is responsible for promoting public awareness of fire safety and prevention.

Fairs, community meetings, senior groups, health care facilities, schools, group centers, summer camps, tours, organizations, businesses, and day care centers are used to promote fire education. Fire Department personnel share an understanding of the principles involved with fire safety.

Fire education covers topics such as smoke detectors, fire extinguishers, escape planning, smoking, and cooking safety. Individuals are encouraged to pass this information onto their family, friends, and neighbors.

In 1988, the Boston Fire Department in conjunction with the National Fire Protection Agency, introduced the "Learn not to Burn" curriculum in two elementary schools in East Boston: the Patrick J. Kennedy School and the Hugh R. O'Donnell School. The goal of the program was to teach children how to protect themselves, their family members, their friends and others from the hazards of fire. Children were taught to be responsible for the protection of their own property as well as the property of others. Our overall goal is to reduce the number of fatalities.

FIRE PREVENTION RECORDS

This section interacts with the public during business hours. They assist fire victims, citizens applying for permits and licenses, and provide research on inquiries.

Company commanders are notified by this section when inspections for certain occupancies are required. Data, including inspection dates, is recorded for each occupancy.

MICROFICHE SECTION

For the year 1988, microfilming Fire Department records for future use has been beneficial for the safe keeping of the following documents: fire reports, fire alarm dispatch slips, arson reports, underground storage tanks, complaints, chief's reports, emergency medical reports, licenses, abatements, permits and interagency forms.

The use of microfiche has made it easier to access old records and make copies of them. This system provides a legally acceptable document for court cases and the public.

HIGH RISE SPRINKLER RETROFIT LAW

A serious fire at the Prudential in January 1986 led to a High Rise Sprinkler Law which was passed and signed into law in the Fall of 1987. It is officially known as Massachusetts General Law — Chapter 148 — Section 26A½.

The wording of the law was questioned and a legal opinion was sought on the condominium issue. Attorney General James Shannon ruled favorably on this issue in the Spring of 1988.

The owners of high rise buildings received literature about the law and were required to make decisions regarding the sprinklering of their building. The compliance enforcement has met with great success. All "classic" high rise buildings (15 or more stories) are either fully sprinklered and alarmed or actively engaged in the process.

All work is to be completed by 1998. The threat of a "towering inferno" will then be effectively eliminated in the City of Boston.

NEEDLESS ALARM REDUCTION PROGRAM

The Needless Alarm Reduction Program (NARP) started on September 1, 1987 with the institution of Fire Prevention Order 87-2. Its intent was to reduce the number of responses of Boston Fire Department personnel and apparatus to needless alarms. Alarm system malfunctions caused by sprinklers, smoke detectors, and heat detectors at properties with central stations and master boxes are addressed by this program.

An ordinance requiring mandatory fines for needless fire alarm responses was passed unanimously by the Boston City Council in 1988. This legislation became an integral part of the Needless Alarm Reduction Program and became effective January 1, 1989.

Numerous locations have made significant improvements to their safety systems, relocated smoke detectors, and decreased their sensitivity. Engineers, facility managers, and fire safety officials have all helped make an impact on needless alarm reductions.

The fine process has made it financially prudent for many property owners to address their problem rather than continue to pay fees to the City.

CHEMIST

The duties and responsibilities of the Chemist include the development and implementation of regulations based on the Fire Prevention Code, Article IX, Decorations, Furnishings and Interior Finish, and Article XX, Hazardous Materials and the establishment of an analytical laboratory to support fire investigation. The Chemist participates in ongoing programs in the Fire Prevention Division, the Training, Maintenance and Research Division and the Special Services Division.

FIRE PREVENTION LABORATORY

The establishment of the Fire Prevention Laboratory was accomplished in accordance with the order of the Fire Commissioner following the mandate of the Mayor in February 1984. The Laboratory is operated under the direction of a full time professional forensic chemist. Laboratory reports and the testimony of the Senior Analytical Chemist are accepted in criminal cases prosecuted in Suffolk County. The Senior Analytical Chemist has responded to major fires to assist the Fire Prevention Unit in its selection of material for analysis. The laboratory has enhanced the ability of the Fire Department to successfully investigate and prosecute arson cases.

CONTROL OF DECORATIONS, FURNISHINGS, AND INTERIOR FINISH

The Department Chemist has continued the development and implementation of controls on combustible building contents under the authority of Article IX of the Fire Prevention Code.

The regulations for upholstered furniture have received national recognition and have played a major role in the development of standardized full scale test procedures. These new tests are the focus of a national effort to control furniture in hotels, hospitals, entertainment facilities and other regulated occupancies.

A potential fire hazard in hospital bedding was uncovered and investigated. Hospitals were contemplating the use of foam pads of substantial size on top of mattresses to reduce the incidence of bed sores. Tests were performed with pads and hospital mattresses and the potential fire hazard of the pads was confirmed. It was further determined that some of the mattresses routinely used by hospitals constituted a fire hazard. The existing regulation for mattresses for hotels and dormitories was extended to hospitals. The foam pads used in hospitals are regulated.

In addition to the classification of materials by performance of fire test, considerable effort was expended to inform and communicate with architects, designers, purchasing agents and sales organizations the importance of the Fire Department regulations and procedures for compliance. This work was recognized in 1988.

HAZARDOUS MATERIALS

Fire Prevention activities include the Laboratory Safety Program, the Regulations Controlling the Transportation of Hazardous Materials, and the permit/license controls for the storage and use of hazardous materials.

Training, Research, and Maintenance activities include being responsible for the specifications used to procure protective clothing and equipment and making field evaluations of newly developed protective clothing. The Chemist takes part in the special training exercises conducted for fire companies and chief officers who respond to major hazardous materials incidents. He serves on committees designated to prepare Standard Operating Procedures for hazardous material incidents.

The Department has a technical specialist on-call for response to hazardous material incidents. Five (5) members of the fire fighting force have the technical expertise and training to handle these emergencies.

FIRE INVESTIGATION UNIT

The Fire Investigation Unit (F.I.U.) responds to fires, other Boston Fire Department incidents, citizens' complaints, delivers charges, and follows up on investigations. Members respond to calls of fire personnel being harassed at an incident.

The F.I.U. has the ability to do searches of paper trails on different properties. This allows them to get a better handle on arson-for-profit, which has a tendency to increase as the economy and real estate values are depressed. The Unit is tracking high risk properties in the hope of preventing arson from occurring.

The total number of incidents responded to by the Fire Investigation Unit in 1988 was 863. The breakdown is as follows:

Incendiary	366
Suspicious	159
Cause given	299
Undetermined	39
	863

The above resulted in the following:

Arrests	64
Court Cases	254
Convictions	103

The numbers above do not reflect responses to citizen complaints, delivering charges, follow up investigations, interviews and other services provided by Unit members. Assistance is given to Fire Prevention Inspectors when requested. Members also respond to assist fire companies when police are requested for harassment.

The Major Case Unit continues to be an effective tool in investigation follow ups and enabling the apprehension of people responsible for arson, attempts to burn and fraud.

The Unit remains involved with the Boston Arson Prevention Commission (B.A.P.C.) in assessing possible arson locations and suspicious persons. B.A.P.C. receives tips and anonymous calls which are forwarded to the Fire Investigation Unit.

Community liaison is a part of the Unit's activities. Members attend meetings in the neighborhoods throughout the city. Arson or potential arson problems are discussed.

Due to enforcement of Chapter 44, which pertains to the reporting of vehicle fires, the total number of vehicle fires (incident types 130 and 131) has been steadily decreasing, as has the number of suspicious, incendiary and undetermined vehicle fires.

	1986	1987	1988
Total: (incident types 130 & 131)	4,027	3,477	2,651
Estimated loss	$13,891,725	$12,070,054	$9,789,193
Total: (ignition factors 00-11-21)	3,443	2,943	2,149
Total estimated loss	$12,760,085	$10,770,284	$8,430,693

The reduction in incident types 130 and 131 is as follows:

1986 to 1987: 14% decrease
1987 to 1988: 24% decrease
1986 to 1988: 32% decrease

Due to the high dollar loss, the time spent on investigation of vehicle fires, with resulting apprehension and arrest of persons setting these fires, seems well spent. We have been working diligently to attempt to have burnt vehicles towed more promptly so that fire companies are not responding two or three times for the same vehicle. Ideally, we would like to see them removed before they are burnt again so that fire companies are not needlessly occupied. So far, despite the Unit's efforts and those of the Boston Arson Prevention Commission, we have been unsuccessful.

TRAINING MAINTENANCE & RESEARCH DIVISION

1) Department Training Program
2) Protective Breathing Equipment
3) New Equipment
4) Field Evaluation of Safety Equipment
5) Research and Evaluation
6) Servicing and Repair Programs
7) Driver Safety and Training Program
8) Harzardous Material Training Program

TRAINING, MAINTENANCE & RESEARCH DIVISION

The primary function of the Training, Maintenance, and Research Division is twofold:

1) To initiate and supervise the job development of the fire fighter, commencing with the probationary period and continuing throughout his career.

2) To become involved in research programs designed to improve fire fighting techniques, fire fighting apparatus and equipment, and protection of fire fighters; to prepare specifications for new fire apparatus; to test and evaluate newly acquired fire apparatus; and to test and evaluate new tools and appliances before recommending their use in the Department.

DEPARTMENT TRAINING PROGRAM

Recruit training for 1988 totaled 36 new trainees for the Boston Fire Department and eight new trainees from outside towns totaling 44 fire fighters on probation. The class was held from January 27 through March 31, 1988. A total of nine (9) weeks of intensive training was held at the John A. Martin Fire Academy, Moon Island. All new recruits were tested and graduated on April 1, 1988.

In addition to the training of the new recruit classes at the Fire Academy, a constant program of instruction and drills are held at both the company level and at the Academy.

The Maze located at the Fire Academy was used from January through August to complete the training of the 4.5 Air Mask for all Department members. The Portable Maze was put in operation in October 1988 at the quarters of Engine 2 in District 6 for the required training of the 4.5 Air Mask for 1989. The Portable Maze will be moved to various fire districts in the city until every member has completed the requirement.

A drill on respiratory protective equipment was conducted by the Training Officers of every fire company in the city. This drill was a basic review of the S.O.P. 32, 32A, 32B which covers the care, maintenance, and operation of the 4.5 Air Mask.

A lecture and video presentation on Fire Fighter Safety was conducted by a District Chief from the Safety Division. Every member and all Chief Officers in the Department received this training on Fire Fighter Safety.

Each fire company equipped with the Rescue Survival Suit was drilled on the correct operation and maintenance of the Survival Suit according to S.O.P. 44 by the Training Officer from the Fire Academy. The drill was conducted at Jamaica Pond, Turtle Island, Orient Heights, Kelly's Landing and the MDC boat ramp on Nonantum Road. Both companies, in a house that had a survival suit, participated in the drill.

Fire College for all Company Officers and Acting Officers was held at Memorial Hall, Headquarters. Subjects covered included matters relating to the Personnel Division, Safety Division, the Employee Assistance Program, Fire Prevention, Administrative Division, Training Division and Fireground Procedures.

A Vehicle Extrication drill was held for all companies who carry the Hurst Tool, Amkus Tool or Hamatro Tool. A thirty-minute video was shown prior to the actual on hands drill.

A Vehicle Extrication Course was held at Memorial Hall for the classroom video presentation and the actual on hands training was held at the Fire Academy. The course provided training in the overall aspects of vehicle extrication, use of power tools, hand tools and patient care.

All engine companies and the Tower Unit were trained at the Fire Academy in the principles of Foam operations. Every member received training in foam operations with the use of hand lines and heavy stream appliances. Engine companies with the Mini X Foam nozzle (High Expansion) and both the 1½" and 2½" pick up tube were also drilled on the foam procedure.

Engine companies were drilled at the Academy on the proper procedure for operation of the Hydrant Assist Valve and also on the correct drafting procedure. Ladder companies and the Tower Unit were drilled on the proper technique for raising and lowering ground ladders (28', 35', 40') roof ladders, dogging of ladders, raising and lowering the aerial ladder to the roof, and the ladder pipe operation.

All ladder companies and the Tower Unit were steam cleaned, weight tested, lubricated, and checked for any defects at the Fire Academy by the Maintenance Division.

An Arson Seminar, with the actual burning of automobiles at the Fire Academy, was held.

Training on the proper operation and familiarization of new Emergency One Aerial Ladders (Ladders 1, 11, 23, 24) and new Emergency One Pumps (Engines 7 and 49) was completed.

All Engine Companies were given a familiarization drill of the standpipe connections and hydrant locations to Sumner and Callahan tunnels.

PROTECTIVE BREATHING EQUIPMENT

S.O.P. 32, 32A, 32B and 32C was revised effective November 1, 1988.

The harness on all the 4.5 Air Tanks in the department have been replaced with the Kevlar flame resistant type harness.

A maintenance program was initiated in December 1988 for all air masks to have a complete maintenance check of all parts and to be tested prior to being returned to service.

Hydrostatic testing of all air cylinders is an ongoing process and every air cylinder is hydrostatically tested every three years.

NEW EQUIPMENT

The following equipment has been placed in service:

Around the Pump Proportioner (Foam) — Engine 7 drilled at Fire Academy and now in use.

Engine 20 had its piping arrangement overhauled and added a feed booster tank directly from hydrant and a connection to enable the engine to get foam directly from container.

All engine companies have been supplied with 300 feet of 1¾" synthetic rubber hose and 200 feet of 1½" synthetic rubber hose. All ladder companies have been given 300 feet of 1¾" cotton polyester hose.

FIELD EVALUATION OF SAFETY EQUIPMENT

Field testing of the Globe fire coat and night hitch as a complete protection package was conducted. The Carns-Firefighter coat with two outer shells, nomex and neoprene, was evaluated.

The Cairns & Brothers New Yorker N6A1 Sam Houston fire helmet was tested.

A new non-skid safety sole for better contact with different surfaces from Ranger Rubber Company was evaluated. Ranger FIREWALKERS leather work boots were field tested for practicability in the fire service. Servus brand fire boots with Urethane insulation were field tested.

Testing of gloves produced by the Shelby-Wolverine Company with an outer shell of 3 ounce reverse grain pigskin was conducted. Gloves submitted by the Shelby-Wolverine Company with an outer shell of tanned cowhide were evaluated. Two different styles of leather work duty gloves made by Firecraft Inc. were field tested.

RESEARCH AND EVALUATION

Biosystem Posicheck is a computerized test bench used to dynamically check the performance of fully assembled supplied air respirators and on SCBA and print out results.

An evaluation was conducted at the Fire Academy of the 35 foot (3-Section) ground ladder by seven different ladder companies.

SERVICING AND REPAIR PROGRAMS

A year round service and repair program is conducted by this division on all fire fighting equipment, tools, and appliances at our repair facilities at Headquarters and at the Fire Academy.

DRIVER SAFETY AND TRAINING PROGRAM

Driver training was scheduled by the District Fire Chiefs for all companies in their respective districts for weekend day tours. Driver training is given to any fire company whose deputy recommends it after an accident hearing at the Division. All new recruits, starting with the class of March 1989, will complete the driver training course.

HAZARDOUS MATERIAL TRAINING PROGRAM

Under Title III, there are mandatory training requirements for fire personnel which involve a minimum of 24 hours per year for all members of the fire fighting divisions and 40 hours per year for members of special response teams.

The program was started in November of 1988. Training guides have been issued to each fire company and video tapes to each District Fire Chief for distribution to companies on a monthly schedule to meet the required drill period.

DRESS CLOTHING ISSUED

Deputy Chief sack coats	5
Officer's sack coats	50
Fire Fighter's sack coats	125
Dress trousers	250
White dress shirts	340
Light blue dress shirts	250
Navy blue shirts	275

SAFETY EQUIPMENT ISSUED

Fire coats	178
Fire boots	210 pair
Helmets	108
Work gloves	1,789 pair
Short sleeve fire resistive station uniform shirts	1,687
Fire Fighter sweatshirts	1,691
Fire resistive work trousers	1,684

SPECIAL SERVICES DIVISION

1) Planning and Logistics
2) Fire Alarm Section

SPECIAL SERVICES DIVISION

The Boston Fire Department undertook a reorganization of the Fire Alarm Division, which consists of the Fire Alarm Office and the Fire Alarm Construction Unit, and the Planning and Logistics Division, which consists of Civil Defense, the Water and Hydrants Unit, the Elevator Unit, the Fire Department Emergency Medical Services Unit, the Underwater Recovery Team and the Local Emergency Planning Unit into the Special Services Division during 1988.

PLANNING AND LOGISTICS

In 1988, the Planning and Logistics Division began a program of computerization of the fire hydrants in the city, both municipally owned and privately owned. This program will allow the Fire Department to identify those hydrants subject to damage by vehicles and/or vandals as well as keeping an inventory of hydrants used at incidents and the condition found during such use. The annual inspection of hydrants by fire companies throughout the city will be monitored.

The Elevator Safety Officer has been attending the State Elevator Safety Board's meetings in order to assure the incorporation of safety measures that are of concern to the Fire Department. These issues are mainly in the fire fighter's key switch phases I and II and the safety of fire fighters working about the elevators when people are trapped within an elevator that has malfunctioned. These issues will remain a concern of the elevator safety officer until resolved.

The Emergency Medical Services Section made advancements in the area of Emergency Medical Technician (E.M.T.) training while assisting in the recertification of E.M.T.s by the State Office of Emergency Medical Services. Yearly retraining of fire fighters in first responder courses and CPR (Cardio Pulmonary Resuscitation) courses was continued to meet federal and state mandates.

The Underwater Recovery Team (S.C.U.B.A.) has continued to assist in the search and rescue efforts of victims reported to be in any of the waters of the City of Boston. They also have done survey work on the piers and wharves of the harbor to assist in the removal of navigational hazards found in these areas. The Team surveys the underside of the Fire Department's Marine Units ("Fire-

fighter" and "St. Florian") in addition to handling requests by other governmental agencies for similar types of surveys.

The Local Emergency Planning Unit arranged the Local Emergency Planning Committee's (L.E.P.C.) Hazardous Materials Drill in October of 1988. The drill proved that the City of Boston has a workable hazardous material incident plan and will continue to upgrade the plan in order to be able to handle any and all types of such incidents whenever and wherever they might occur. The L.E.P.C. submitted the city's plan to the area office of Civil Defense by the designated date prescribed in the Superfund Reauthorization Act of 1986.

The Civil Defense Director took part in many Civil Defense Planning Sessions with the state offices of Civil Defense. The Civil Defense Unit undertook a survey of facilities within the City of Boston and will begin to upgrade said facilities needed and phase out those facilities where not practical. The Civil Defense Unit also participated in "Civix" 88 as part of the Civil Defense requirements.

FIRE ALARM SECTION

The Fire Alarm Section is responsible for the installation, maintenance and operation of the vast emergency communications network incorporated by the Boston Fire Department. This is accomplished through the activities of four (4) subsections: Operations, Radio Shop, Construction, and Inside Wiremen.

FIRE ALARM OPERATIONS

The Operating Force of the Fire Alarm Section dispatched apparatus to 49,969 incidents during 1988, of these 60 were working fires and 60 required transmission of multiple alarms.

Fire Alarm personnel are involved with nationally recognized associations concerned with the many facets of public safety communications by serving on various committees, attending seminars and participating in sponsored workshops. These activities afford the members an opportunity to keep abreast of the many advancements in emergency communications technology such as Computer Aided Dispatch systems, Enhanced 9-1-1 and fiber optic cable applications.

Four (4) Motorola Centracom Series II Consoles were installed in March 1988. Features include the following:

8 channels — four of which operate in Half-Duplex Mode
Simulcasting on any combination of channels
3 preset simulcast modes/set by operator

1 button paging of up to 125 units
Private line disable when paging
Phone patch capability
Intercom system between consoles
Multiple repeater sites for each channel
Repeater disable function
Special location repeaters/tunnels
Voter-Comparator receive system
Uninterruptable Power Supply

The following equipment is also installed in each of the Motorola Consoles:

NYNEX 80 line Centrex Telephone
Dicataphone Call-Check/endless loop recorder
Wang VS-65 Dispatch/Reference computer terminal
Digitize remote alarm terminal

Radio Channel Assignments

Channel 1 483.1625	General radio traffic
Channel 2 483.1875	Fireground
Channel 3 483.2125	Fireground
Channel 4 483.2375	High-Rise Evacuation/FAO Construction
Channel 5 453.650	Dispatch
Channel 6 153.890	Paging
Channel 7 154.220	Mutual Aid/Metro Fire
Channel 8 153.890	MBTA Subway Radio System

Digitize Equipment

Four (4) consoles capable of receiving alarms and transmitting boxes were installed in March 1988.

This system handles - 97 Box circuits
9 Mutual Aid circuits
20 Alarm circuits
17 E.V.C.S. circuits

Features include - Hard copy of all system activity
Ability to receive and store multiple boxes
Decode acknowledgments from fire houses
Uninterruptable Power Supply

FIRE ALARM CONSTRUCTION

The last portion of the Southwest Corridor MBTA project was completed in the Forest Hill Station area. This included installing 1,500 feet of 37 Conductor Cable at no cost to the City of Boston.

Cable was rerouted in the City Square area from its present location to a new location due to reconstruction and the Central Artery Project. Cable was also rerouted at Post Office Square due to a major reconstruction project.

Plans were reviewed for cable routing to new housing developments in Roslindale - Hyde Park and Allendale Wood (Jamaica Plain) for installing new Fire Alarm street boxes. Plans were examined for proposed new Fire Alarm street boxes and on Haul Road for the new Third Harbor Tunnel Project.

Plans were reviewed regarding the equipment that will be needed to furnish the new fire house on Purchase Street.

There are 1,350 Fire Alarm street boxes in existence and 1,017 master boxes connected to the city system.

New cable was installed during the year replacing defective cable.

Rural C	3,650 feet
4 Conduct Cable	23,210 feet
6 Conduct Cable	1,500 feet
7 Conduct Cable	2,050 feet
10 Conduct Cable	20,430 feet
19 Conduct Cable	16,450 feet
37 Conduct Cable	8,800 feet
61 Conduct Cable	800 feet
Total Footage	76,980 feet

Fire Alarm Boxes Knocked Down	182
Fire Alarm Boxes Repaired/Replaced	1,272
New Fire Alarm Boxes Installed in Harbor Point	4
City Boxes Tested	2,810

RADIO SHOP

The Radio Shop is responsible for the installation, maintenance and testing of all wireless communication equipment and associated electronic hardware utilized by this Department.

Radio Shop personnel were involved in a number of maintenance and ungrading projects such as: relocating radio and public address system equipment to allow more efficient operation and easier access for maintenance, participating in a cooperative effort with telephone company personnel for upgrading radio loop circuits, periodic testing of fire subway radio systems and the revamping of fire house alerting systems by replacing electron tubes with a solid state integrated circuit made up by shop personnel.

Activities	
Issued new portable radios	7
Installed new base stations at various locations	6
Repaired/replaced speakers	159
Readjusted satellite receiver at various locations	4
Issued new pagers	7

Repaired mobile/portable radios	262
Removed equipment from apparatus	8
Installed new radios in cars and apparatus	10
Repaired sirens	65
Repaired portable radio mis's	15
Issued portable radios to District for details	12
Installed new channel 1 - 3 & 4 receivers at Filene's	
Installed new consoles at Fire Alarm	

INSIDE WIREMEN

The Inside Wiremen are responsible for the installation and maintenance of all electrical wiring and the associated apparatus and appliances, including the internal Centrex telephone system of the Department.

The expanded use of computers within the Department required the installation of cable and peripheral equipment at Fire Department facilities. Fire Alarm was equipped with an Uninterruptable Power Supply for the Wang computer system.

The main floor of Fire Alarm required new wiring with the installation of the new Form 4 Digitize Fire Alarm System.

Electrical equipment for the new Marine Unit location in Charlestown was put in place.

The Maze, a portable training exercise, required a lot of time and effort to meet all of its needs. It was necessary to find a means for portable power wherever it was in use.

The Lighting Plant was stripped and rewired from top to bottom. This truck, a former Pepsi truck, was donated to the Department. It is used at many fires. Portable lighting was another concern.

STATISTICS

COMPARISON OF INCIDENT TYPES

Type	Description	1987 Total	1987 % of Incs.	1988 Total	1988 % of Incs.	+/-
100	Fires or Explosions	9,668	19.0	8,138	16.3	- 1,530
200	Overpressure Ruptures	19	*	14	*	- 5
300	Rescue/EMS Calls	6,484	12.7	7,936	15.9	+ 1,452
400	Hazardous Conditions	5,384	10.6	5,251	10.5	- 133
500	Service Calls	7,279	14.3	7,758	15.5	+ 479
600	Good Intent Calls	5,936	11.7	2,222	4.4	- 3,714**
700	False Alarms/Calls	16,069	31.6	18,606	37.2	+ 2,537**
800	Natural Disasters	3	*	4	*	+ 1
900	Other Situations	28	.1	40	.1	+ 12
		50,870		49,969		- 901

* No Significant %

** Incident Types for Detector Incidents have been changed and these figures reflect those changes.

FIVE INCIDENT TYPES WITH THE MOST OCCURRENCES

1988

Rank	Type	Description	Total	% of Incs.
1	710	False Alarm - Box	6,385	12.8
2	733	Smoke Detector Device Operated - No Fire	4,126	8.3
3	731	Alarm System Malfunction - Smoke Detector	3,511	7.0
4	321	Medical Assist	3,328	6.7
5	592	Public Service	3,291	6.6

1987

1	710	False Alarm - Box	7,132	14.0
2	731	Alarm System Malfunction Smoke Detector	4,088	8.0
3	671	Smoke Detector Device Operated - No Fire	3,477	6.8
4	592	Public Service	3,353	6.6
5	130	Road Transport Vehicle Fire - Passenger	3,311	6.5

RANKING OF WORKING FIRES AND MULTIPLE ALARMS COMBINED BY DISTRICT

1988

RANK	DISTRICT	WORK	MULT	TOTAL
1	5	9	10	19
	7	11	8	19
3	9	8	7	15
4	11	4	10	14
5	3	10	3	13
6	6	4	5	9
7	12	2	6	8
8	4	5	2	7
	8	3	4	7
10	1	2	3	5
11	10	2	2	4
		60	60	120

1987

RANK	DISTRICT	WORK	MULT	TOTAL
1	7	9	19	28
2	5	4	9	13
3	4	3	8	11
	6	3	8	11
5	8	6	4	10
	11	1	9	10
	12	5	5	10
8	1	1	6	7
	9	4	3	7
10	3	4	1	5
11	10	3	1	4
		43	73	116

COMPARISON OF ALARM LEVELS BY MONTH

WORKING FIRES AND MULTIPLE ALARMS COMBINED

MONTH	1987 TOTAL	1987 YTD	1988 TOTAL	1988 YTD
January	10	10	17	17
February	16	26	11	28
March	12	38	5	33
April	8	46	10	43
May	12	58	8	51
June	7	65	16	67
July	13	78	5	72
August	7	85	4	76
September	3	88	8	84
October	7	95	5	89
November	12	107	12	101
December	9	116	19	120

COMPARISON OF ALARM LEVELS

	1987	1988
Working Fires	43	60
Second Alarms	49	47
Third Alarms	12	6
Fourth Alarms	5	6
Fifth Alarms	1	
Sixth Alarms	1	
Seventh Alarms	4	1
Eighth Alarms		
Ninth Alarms	1	
	116	120

TOTAL RUNS PER COMPANY

ENGINE	TOTAL RUNS	LADDER	TOTAL RUNS	MISC.	TOTAL RUNS
1	82	1	999	CU1	264
2	904	2	1,614	HO1	623
3	1,506	4	3,521	HO2	632
4	1,632	6	2,459	HO3	129
5	1,316	7	2,695	MU	220
7	2,335	9	1,032	RO1	1,972
8	770	10	2,426	RO2	2,220
9	872	11	1,900	TC	2,161
10	2,070	14	2,636	W12	177
14	2,361	15	3,187		
16	1,462	16	2,083		
17	1,587	17	3,493		
18	1,881	18	2,075		
20	781	19	1,118		
21	2,353	21	933		
22	1,784	23	2,955		
24	2,489	24	2,003		
28	1,793	25	1,272		
29	1,551	26	3,902		
30	988	28	1,384		
32	641	29	2,450		
33	2,884				
37	3,365				
39	1,485				
41	2,343				
42	2,088				
48	1,243				
49	435				
50	1,053				
51	806				
52	1,895				
53	1,805				
FB	98				
55	684				
56	680				

NOTE: This report tallies only responses to the scene of an incident. Covering is not recorded here.

MUTUAL RESPONSES

TOTAL RESPONSES TO	CITY/TOWN
121	City of Chelsea
49	City of Somerville
38	Town of Dedham
36	Town of Brookline
33	City of Cambridge
32	City of Newton
23	Town of Milton
16	City of Revere
15	City of Quincy
5	Town of Winthrop
3	City of Everett
2	Town of Needham
1	Town of Braintree
1	City of Malden
1	City of Medford

CITY OF BOSTON PRINTING SECTION